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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/638,924	08/15/2000	William Lewis Betts	61607-1260	9164
24504	7590	12/13/2004	EXAMINER	
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948			GHULAMALI, QUTBUDDIN	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/638,924

Applicant(s)

BETTS ET AL.

Examiner

Qutub Ghulamali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 49- 93 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 49-76, 78-79, 82-83, 85-86, 89-90, 92-93 is/are rejected.
- 7) ☒ Claim(s) 77, 80, 81, 84, 87, 88 and 91 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Acknowledgment***

1. This Office Action is responsive to the Amendment filed on 08/06/2004.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 75, 77, 79, 82, 91 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Consider claims 75 and 82, these claims recite the limitation "the transmission rate" in line 7. There is insufficient antecedent basis for this limitation in the claims.

Regarding claims 77 and 91, these claims recite the limitation "maximum duration of" in line 3. It is not clear what the "maximum duration of" means.

Regarding claim 79, claim 79 recites the limitation "the collecting step" in line 2. There is insufficient antecedent basis for this limitation in the claim.

### ***Response to Arguments***

4. Applicant's arguments filed 08/06/2004, with respect to claims 49, 52, 56, 60, 63, 67, and 71, have been fully considered but are moot in view of the new ground(s) of rejection.

The rejection based on the newly found art to Smith (US Patent 3,935,392) is as follows:

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 52, 56, 63, 67, 71, 75, 76, 78, 79, 82, 83, 85, 86, 89, 90, 92, and 93, are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell et al (US Patent No. 4,771,417) in view of Smith et al (US Patent No. 3,935,392).

Maxwell (figs. 1, 12) discloses a control circuit configured in the form of a processor to direct the overall operation of the modem (col. 4, lines 32-44), the ability of the modem to detect errors in data transmission based upon the processor of the modem constantly monitoring (detecting) the number of errors, change the speed of data transmission is based upon determination of data transmission (quality) errors frequent data transmission errors leads to a fallback (change in rate) speed of transmission (col. 2, lines 64-67; col. 3, lines 1-4; col. 20, lines 28-40) and determines whether the quality of the data transmission indicates qualification for a fallback (lowering the rate) in speed based upon the number of errors in data transmission, the processor of the modem constantly monitors the number of errors in data transmission as reflected by the number of retransmitted data frames, if the number of retransmissions is high, indicating too many errors are encountered and line quality is poor, the modem drops down to the next lower speed until an acceptable reduction in errors in transmission is achieved, if the line quality improves and the number of errors is reduced, the modem will automatically

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fallforward to the next higher speed, if the acknowledgement does not come within a prescribed time out period (time lapsed) the modem initiates recovery by establishing the link and reentering the transmit sequence, (col. 19, lines 46-67; col. 20, lines 10-18, 29-40). The difference between the above and the claimed invention is the use of the term periodic transient. Smith shows an apparatus and method for detecting the occurrence of dial pulse signal wherein transient signals within the frequency range of possible dial pulse signals are detected, each "make" and "break" generates transient signals within the speech-frequency transmission and transmits the transient signal pulse bursts so that the received signal is a series of transient pulse burst. It would have been obvious to the person having ordinary skill in this art at the time the invention was made to provide a similar transient detection arrangement for Maxwell so that the processor can suspend or lower the data transmission rate upon detection of errors or transients as taught by Smith (abstract; col. 2, lines 1-13, 50-53). Additionally, it is expressly noted in the context of the applicant's disclosure in the background of the invention on pages 1 and 2, that transients in broad terms, refers to ringing, impulse noise or bit errors commonly associated with pulse signals in telephony systems.

Regarding claims 76, 83 and 90, Smith disclose (col. 2, lines 3-13), transient timing 60 ms apart, transient duration for 40 ms, and occurrence of pulse burst every 100 ms (transient rate), (see col. 1, lines 64-68; col. 2, lines 1-18). It would have been obvious to the person having ordinary skill in this art at the time the invention was made to provide data comprise of at least one of transient timing, transient duration and rate with Maxwell so as to enhance transmission rate as taught by Smith.

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7. Claims 49, 53, 57, 60, 64, 68, 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell et al in view of Smith et al (US Patent No. 3,935,392) as applied to above claims, and further in view of Frick et al (US Patent No. 5,473,676).

Maxwell and Smith in combination with other claimed limitations disclose every aspect of the claimed invention, but the combination is silent regarding measuring the length of time between transients. Frick, in the same field of endeavor, discloses (fig. 2) signal received by the modem 24 is monitored by the tone detectors 242 and 244 adapted to detect a start tone for approximately 200 msec providing a measure of time between tones. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a processor programmed to measure the length of time between tones or transients as taught by Frick, in the combination of Maxwell and Smith so as to facilitate the communication process capabilities (col. 7, lines 44-56; col. 11, lines 52-61). Additionally, it is noted in the context of the applicant's disclosure in the background of the invention on pages 1 and 2, that transients in broad terms, refers to ringing, impulse noise or bit errors associated with *pulse signals or pulse tones* as is well known in telephony art)

8. Claims 50, 51, 61, and 62, are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell et al in view of Smith et al (US Patent No. 3,935,392), further in view of Frick et al (US Patent No. 5,473,676) as applied to claims 49 and 60 above, and further in view of Parrott (US Patent No. 6,351,533).

As applied to claims 50, 51, 61 and 62, Maxwell, Smith and Frick in combination with other claimed limitation disclose every feature of the claimed invention, but the combination is silent regarding processor configured to determine the cadence of errors or transients. Parrott,

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discloses a ring signal 317, routed to processor 318, wherein the signal 317 is analyzed for duration and cadence (col. 6, lines 9-15). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize processor configured to determine the cadence of errors or transients as taught by Parrott in combination of Maxwell, Smith, and Frick because it can improve the determination of transmission rate in a communication system.

9. Claims 54, 55, 58, 59, 65, 66, 69, 70, 73 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell et al (US Patent No. 4,771,417) in view of Smith et al (US Patent No. 3,935,392) and further in view of Parrott (US Patent No. 6,351,533).

As indicated with reference to claims 52, 56, 63, 67, 71, 75, 82, and 89 Maxwell and Smith in combination with other claimed limitations disclose every feature of the invention. The difference between Maxwell, Smith and the claimed invention is that of a processor configured to determine the cadence of errors or transients. Parrott (fig. 3) with reference to claims 54, 55, 58, 59, 65, 66, 69, 70, 73 and 74 discloses a ring signal 317, routed to processor 318, where signal 317 is analyzed for duration and cadence (col. 6, lines 9-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a processor to determine the cadence of errors or transients as taught by Parrott in the system of Maxwell and Smith so as to improve the determination of transmission rate in a communication system.

*Allowable Subject Matter*

10. Claims 77, 80, 81, 84, 87, 88, and 91 are objected to as being dependent upon a rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

*Conclusion*

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (571) 272-3014. The examiner can normally be reached on Monday-Friday from 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QG.  
December 7, 2004.

TEDESCHEN GHEBREHINSAE  
PRIMARY EXAMINER  
12/7/04  
NBP